

### **REMARKS**

Claims 1-24 are pending in the present application. Claims 1, 5, 7, 8, 10, 11, 12, 13, 17, 19, 20, 22, 23, and 24 are amended. Support for the amendments to the claims may be located at least on page 13, line 20 through page 15, line 31; on page 16, line 20 through page 17, line 10; and on page 18, line 7 through page 19, line 16.

Reconsideration of the claims is respectfully requested.

Amendments are made to the title of the specification for clarification as suggested by the Examiner. No new matter is added by any of the amendments to the specification.

#### **I. Telephone Interview**

Applicants thank Examiner Quoc A. Tran for the courtesies extended to Applicants' representative during the March 8, 2005 telephone interview. During the interview, Applicants' representative discussed amendments to the independent claims and the distinctions between the specification and the *Law* and *Pant* references. Examiner Tran agreed that amendments to the independent claims would likely overcome the cited references. The substance of the telephone interview is summarized in the following remarks.

#### **II. 35 U.S.C. § 112, Second Paragraph**

The Office Action rejects claims 1, 5, 7, 11, 13, 17, 19 and 23 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

The Office Action states:

Claims 1, 5, 7, 11, 13, 17, 19 and 23, rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention of the term 'associative terms', which is directed to the related subject matter to the search terms or directed to exact textual meaning of the search terms. For example, a search term such as: coffee which could be associated to other beverages such as: tea or cola. Also, the 'associative terms', for coffee, which also could reads as java coffee/mocha coffee or the like. Clarification and/or correction are required.

Office Action dated December 14, 2004, pages 2-3.

Claims 1, 5, 7, 11, 13, 17, 19 and 23 are amended to clarify the meaning of "associative terms" and to further clarify the subject matter of the present invention. Therefore, Applicants respectfully submit that the rejection of claims 1, 5, 7, 11, 13, 17, 19 and 23 under 35 U.S.C. § 112, second paragraph is overcome.

### III. 35 U.S.C. § 103, Alleged Obviousness Based on *Law* and *Pant*

The Office Action rejects claims 1-24 under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Law et al.* (U.S. Patent 6,754,873), hereinafter referred to as *Law*, in view of *Pant et al.* (U.S. Patent 6,012,053), hereinafter referred to as *Pant*. This rejection is respectfully traversed.

As to independent claims 1, 8, 11-13, 20 and 23-24, the Office Action states:

In regard to independent claim 1, "processing a plurality of Web pages using the set of weighted associative terms to generate a plurality of cumulative ratings in which each Web page within the plurality of Web pages has a cumulative rating; and selecting the Web page as a Web page having a selected cumulative rating greater than a threshold", as taught by '873 at col. 6, lines 10-30 (i.e... FIGS. 5 and 6 ... the techniques are used in conjunction to generate an accurate list of related web pages. The techniques can be combined by multiplying all the values for a given link in order to determine the final value for the link. As an example, the following table shows the scores that would be generated for each of the web pages of forward link set 218 utilizing this technique: Web Page Links Score 213  $(1/2) + (1/4) 0.415$  216  $(1/4) + (1/3 * 1/2) 0.415$  ... One or more of these techniques can also be combined with a measure of text-based similarity of the web pages...), also as taught by '873 at col. 7, lines 20-35 (i.e... The list of related web pages can be generated from the forward link set according to the score of the web pages. In other words, the score is an indication of the relatedness to the selected web page and the higher the score, the more related the web page is ... The displayed list of related web pages can be predetermined number of the most highly related web pages, web pages that have a score greater than a threshold or any other way of selecting a number of related web pages to display...);

'873 does not explicitly teach, "identifying associative terms; weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms", however as taught by '053 at col. 2, lines 25-45 (... relevance for each of the items in the set of search results...).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified '053 into '873 to provide a way, wherein identifying associative terms; weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms. One of the ordinary skills in the art would have been motivated to perform such a

modification to provide a word-based search engines, which could allowed users to enter words, phrases, and other search criteria so that the search engine can retrieve the hyperlinked documents that best match the user's search criteria with great flexibility, as taught by -873 at col. 1, lines 35-40 (i.e... Word-based search engines allow a user to enter words...). ...

In regard to independent claim 11, is directed to a system for performing the method of claim 1 and is similarly rejected along the same rationale. ...

In regard to independent claim 13-19 consecutively, are directed to a system for performing the method of claims 1-7 consecutively and are similarly rejected along the same rationale. ...

In regard to independent claim 23-24, are directed to a system for performing the method of claims 1, 8 and are similarly rejected along the same rationale. ...

Office Action dated December 14, 2004, pages 3-5 and page 9-10.

As amended, claim 1, which is representative of the other rejected independent claims 11, 13 and 23 with regard to similarly recited subject matter, reads as follows:

1. A method in a data processing system for selecting a Web page, the method comprising:
  - receiving at least one user interest term;
  - identifying associative terms, wherein the associative terms are associated with the at least one user interest term;
  - weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term;
  - processing a plurality of Web pages using the set of weighted associative terms to generate a plurality of cumulative ratings in which each Web page within the plurality of Web pages has a cumulative rating, wherein the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms; and
  - selecting the Web page as a Web page having a selected cumulative rating greater than a threshold. (emphasis added)

As amended, claim 8, which is representative of the other rejected independent claims 12, 20 and 24 with regard to similarly recited subject matter, reads as follows:

8. A method in a data processing system for processing documents, the method comprising:
  - assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest; and

selecting a document from a group of documents using the weighted set of terms. (emphasis added)

Neither *Law* nor *Pant*, taken individually or in combination, teaches or suggests identifying associative terms, wherein the associative terms are associated with at least one user interest term, and weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term, as recited in claims 1, 11, 13 and 23. In addition, with respect to claims 1, 11, 13 and 23, the applied references fail to teach or suggest that the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms. Additionally, neither *Law* nor *Pant*, taken individually or in combination, teaches or suggests assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest, as recited in claims 8, 12, 20 and 24.

*Law* is directed to techniques for finding related hyperlinked documents using link-based analysis. Backlink and forwardlink sets are used to find web pages that are related to a selected web page. The scores for links from web pages that are from the same host and links from web pages with numerous links can be reduced to achieve a better list of related web pages. Scoring is based on the number of links. As stated in the Office Action, *Law* does not teach identifying associative terms or weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms. Thus, *Law* does not teach or suggest identifying associative terms, wherein the associative terms are associated with at least one user interest term, and weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term, as recited in claims 1, 11, 13 and 23. Further, *Law* fails to teach that the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms, as recited in claims 1, 11, 13 and 23. Additionally, the Office Action states that *Law* does

not teach the assigning step of claim 8. Thus, *Law* does not teach assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest, as recited in claims 8, 12, 20 and 24.

*Pant* is directed to a mechanism through which results from a search query are ranked according to user-specified relevance factors to allow the user to control how the search results are presented. The relevance factors are applied to the results achieved for each query. Each item returned by the search has a set of attributes. Examples of these attributes are a date, location, or size of a document or whether a document contains a particular search term. Each attribute is assigned a weight according to a specified relevance factor. For example, a search term that appears in a title may be given a greater weight than the same search term in the normal body text. The weights are combined to provide a score for each item. *Pant* does not teach or suggest identifying associative terms, wherein the associative terms are associated with at least one user interest term, as recited in claims 1, 11, 13 and 23. In addition, *Pant* does not teach or suggest weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term. Also, with respect to claims 1, 11, 13 and 23, *Pant* does not teach or suggest that the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms. Additionally, with respect to claims 8, 12, 20 and 24, *Pant* does not teach assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest.

In the rejection of independent claims 1, 11, 13 and 23, the Office Action refers to the following portion of *Pant*:

Accordingly, one aspect of the present invention is a computer system for providing user-controllable relevance ranking of search results from a query on a collection of items of information. The computer system includes a relevance determination module having a first input for receiving a set of search results

from a query indicating items in the collection matching the query, a second input for receiving an indication of relevance factors specified by a user, and a third input for receiving information about the items in the set of search results to which relevance factors may be applied. This module has an output for providing an indication of a score indicative of relevance for each of the items in the set of search results. A sorting module has an input which receives the score associated with each item and an indication of the set of search results, and an output providing to the user an indication of the items in the set of search results in an order ranked according to the relevance score of each item.

Other aspects of the invention include the process performed by the computer system to apply the relevance factors to the search results to provide a score for each item in the search results. (emphasis added)

*Pant*, column 2, lines 25-45.

This portion of *Pant* teaches that there are three inputs to determine the relevance of search results. These inputs are a first input for the query to receive a set of search results, such as a search query; a second input indicating the user-specified relevance factors; and a third input to receive information about the items in the set of search results to which relevance factors may be applied. *Pant* does not teach identifying associative terms. Claims 1, 11, 13 and 23 recite that associative terms are associated to at least one user interest term. For example, if a user interest term of "Troy Aikman" is received, then associative terms, such as "Dallas Cowboys," "quarterback," and "football" may be identified. *Pant* does not teach or suggest identifying associative terms, wherein the associative terms are associated with at least one user interest term, as recited in claims 1, 11, 13 and 23.

Additionally, this portion of *Pant* teaches that the relevance factors are applied to the search results to provide a score for each item in the search results. Examples of relevance factors are the location of a search term in a document; the field (such as a footnote or title) that contains a search term; the frequency of the search term; and the position of the search term within the document. *Pant* does not teach or suggest that the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms, as recited in claims 1, 11, 13 and 23.

In the rejection of independent claims 8, 12, 20 and 24, the Office Action refers to the following portion of *Pant*:

In the invention, a relevance determination module 112 receives the search results 110 from the database query engine 104 and applies pre-specified relevance

factors 114 to each of the corresponding items in the search results 110 to obtain scored search results 116. In particular, each of the items in the search results 110 has a set of attributes associated with it, which the module 112 may use the database 102 to access and identify if such information is not made available in the search results 110. Each of these attributes is given a weight according to the specified relevance factors 114. These weights are combined to provide a score for each item. The scored search results are sorted by sorting module 118 to provide ranked results 120 which are provided to a user interface 122 to be output to the user. (emphasis added)

*Pant*, column 3, lines 40-55.

This portion of *Pant* teaches that a relevance determination module receives the search results from the database query engine and applies pre-specified relevance factors to each of the corresponding items in the search results to obtain scored search results. Each of the attributes associated with an item in the search results is given a weight according to the specified relevance factors. Examples of these attributes are a date, location, or size of a document or whether a document contains a particular search term. *Pant*'s attribute is not a set of terms. Further, *Pant* does not teach assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest, as recited in claims 8, 12, 20 and 24. Similarly, with respect to claims 1, 11, 13 and 23, *Pant* does not teach or suggest weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term.

*Law* and *Pant* fail to teach or suggest identifying associative terms, wherein the associative terms are associated with at least one user interest term, and weighting the associative terms in response to an identification of the associative terms to form a set of weighted associative terms based on specified probabilities that the associative terms are relative to the at least one user interest term. In addition, *Law* and *Pant* fail to teach or suggest that the cumulative rating for a particular Web page within the plurality of Web pages is based on the set of weighted associative terms. Therefore, the alleged

combination of *Law* and *Pant* does not teach or suggest these features, as recited in independent claims 1, 11, 13 and 23.

Additionally, *Law* and *Pant* do not teach or suggest assigning weights to a set of terms, wherein the set of terms is associated with at least one particular term of interest and wherein each term within the set of terms is associated with a weight to form a weighted set of terms based on specified probabilities that the set of terms is relative to the at least one particular term of interest. Therefore, the alleged combination of *Law* and *Pant* does not teach or suggest this feature, as recited in independent claims 8, 12, 20 and 24.

Therefore, *Law* and *Pant*, taken individually or in combination, do not teach or suggest the features of dependent claims 2-7, 9-10, 14-19 and 21-22 at least by virtue of their dependency on independent claims 1, 8, 13 and 20, respectively. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-24 under 35 U.S.C. § 103(a).

In addition, with regard to amended claims 5 and 17, *Law* and *Pant*, either taken alone or in combination, do not teach or suggest that the cumulative rating of the particular Web page is 100 percent minus the probability that the particular Web page is irrelevant, and wherein the probability that the particular Web page is irrelevant is determined by multiplying differences between 100 percent and each of the the set of weighted associative terms. Similarly, *Law* and *Pant*, either taken alone or in combination, do not teach or suggest that the cumulative weight is 100 percent minus the probability that a particular document is irrelevant, and wherein the probability that a particular document is irrelevant is determined by multiplying differences between 100 percent and the weights for each term within the weighted set of terms, as recited in amended claims 10 and 22. *Law* and *Pant* do not mention a cumulative rating or cumulative weight as described in amended claims 5, 10, 17 and 22.

Additionally, *Law* and *Pant*, either taken alone or in combination, do not teach or suggest identifying additional associative terms, wherein the additional associative terms are associated with at least one subject matter term gathered from a displayed Web page selected by a user using parsing logic, as recited in amended claims 7 and 19. *Law* and *Pant* do not mention subject matter terms in their inventions.




Thus, in addition to being dependent on their respective independent claims, claims 2-7, 9-10, 14-19 and 21-22 are also distinguished over the *Law* and *Pant* references based on the specific features recited therein.

**IV. Conclusion**

It is respectfully urged that the subject application is patentable over the prior art of record and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: March 14, 2005

Respectfully submitted,



Stephen R. Tkacs  
Reg. No. 46,430  
Yee & Associates, P.C.  
P.O. Box 802333  
Dallas, TX 75380  
(972) 385-8777  
Agent for Applicants

SRT/vja